
Lahontan Regional Water Quality Control Board

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Comments Regarding Atlantic Richfield Company's Focused Feasibility Study Aspen Seep Conveyance Treatability Investigation Work Plan, Leviathan Mine Site, Alpine County, California

Thank you for the opportunity to comment on Atlantic Richfield Company's (AR) June 26, 2017 *Focused Feasibility Study Aspen Seep Conveyance Treatability Investigation Work Plan* for the Leviathan Mine Site (proposed Work Plan). California Regional Water Quality Control Board, Lahontan Region (Water Board) staff has the following comments:

1. AR prepared the proposed Work Plan prior to their 2017 efforts to demonstrate the feasibility and effectiveness of the HDS Treatment System (HDSTS) to treat combined sources of acid mine drainage (AMD) at Leviathan Mine under reasonably anticipated operating conditions. The results of AR's 2017 demonstration are clearly integral to the actions set forth in the proposed Work Plan. If AR intends to continue with exploring treatment of the Aspen Seep (AS) at the HDSTS along with other sources, Water Board staff expects that USEPA will require AR to update the proposed Work Plan based on results of AR's 2017 demonstration efforts. Water Board staff commits to commenting on any such updated work plan.
2. The proposed Work Plan sets forth plans to convey AMD from the AS to the existing evaporation pond system on the Leviathan Creek side of the mine property. Water Board staff has a number of serious concerns with the proposal, but given the status of the HDSTS field demonstration, it does not

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appear necessary to provide a detailed response to the proposed Work Plan at this time. Among other things, a key concern would be that, given the limited treatment capacity of the HDSTS and the limited evaporation pond capacity, delivery of AMD from the AS to the evaporation pond system would decrease the available capacity within the pond system for storage of AMD emanating from the Adit and the PUD in a manner that would lead to the release of untreated AMD from the pond system to nearby receiving waters under a range of anticipated conditions. Given the current information, including the status of the 2017 HDSTS field demonstration, existing evaporation pond capacity, and the Water Board's current obligation under USEPA's 2005 Administrative Abatement Action (CERCLA Docket No. 2005-15), the Water Board is not in agreement that flow from the AS should be conveyed into the evaporation pond system, as doing so would jeopardize the Water Board's ability to comply with USEPA's 2005 Administrative Abatement Action and greatly increase the risk of release of untreated AMD from the pond system to nearby receiving waters.

3. Water Board staff is in favor of continued efforts to evaluate the feasibility of a centralized treatment facility as a potential long-term remedial option at Leviathan Mine, wherein the five primary sources of AMD at the site are conveyed to a centralized treatment facility on the Leviathan Creek side of the mine property. Water Board staff agrees that the feasibility of conveying AMD from the AS to the Leviathan Creek side of the mine property needs to be evaluated as a component to the Feasibility Study; however, Water Board staff does not agree that, at this time, the evaluation for the AS conveyance system requires completion of system design, construction, and operation of a conveyance system. Instead, Water Board staff believes the feasibility evaluation for the conveyance element of combining the AS flows can be based upon AR's experience in designing, constructing, and operating/maintaining existing conveyance systems on the mine property, including systems to convey AMD from the CUD, Delta Seep (DS), and site evaporation ponds to the HDSTS. The design and construction of a system to convey AMD from the AS to the Leviathan Creek side of the mine property is not the appropriate step for evaluating feasibility at this time.
4. The 2017 field demonstration indicates that the existing HDSTS is not capable of treating the combined flows from the evaporation ponds, CUD, and DS under reasonably anticipated operating conditions and in a reliable manner that would lower the risk for the discharge of untreated AMD from the mine site. Adding AMD from the AS to the evaporation pond system in the manner described in the proposed Work Plan will only exacerbate the risk for the discharge of untreated AMD from the mine site. While combining AMD from the AS with AMD from the CUD, DS, and evaporation ponds does not appear to be a feasible robust option at this time, Water Board staff would not oppose AR efforts to explore other means to treat AMD from the AS on an interim basis (i.e. until commencement of Remedial Action), provided that such efforts avoid adding AMD from the AS to the existing evaporation pond system. If AR elects

to undertake such efforts, it would appear to be part of the Removal Action conducted pursuant to USEPA's 2009 Administrative Settlement Agreement and Order on Consent for Removal Action, and not as part of a Feasibility Study.

If you have any questions regarding these comments, please contact Doug Carey, Senior Engineering Geologist at douglas.carey@waterboards.ca.gov or (530) 542-5468 or me at scott.ferguson@waterboards.ca.gov or (530) 542-5432.

A handwritten signature in black ink, appearing to read "Scott C. Ferguson", is positioned above the typed name and title.

Scott C. Ferguson, P.E.
Supervising Water Resource Control Engineer